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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/530,149

09/29/2005

Herbert Boerner

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

BREVAL, ELMITO

ART UNIT

PAPER NUMBER

2809

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/530,149	<b>Applicant(s)</b> BOERNER ET AL.	
	<b>Examiner</b> Elmito Breval	<b>Art Unit</b> 2809	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>03/29/2007</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1-3, 5,6, and 8** are rejected under 35 U.S.C. 102(e) as being anticipated by Yanagawa (PCT/JP2003/07564).

**Regarding claim 1,** Yanagawa discloses An electroluminescent display comprising a common substrate and an array of electroluminescent devices disposed on the common substrate, wherein each of said electroluminescent devices comprise an electroluminescent layer which is sandwiched between a first and a second electrode (Figure1, electrode 3 (anode), OLED 4, and electrode 4 (cathode)) a color converting material which capable of changing light emitted by the electroluminescent layer into light having a longer wavelength (paragraph [0015]) and a stack of  $2n + 1$  transparent dielectric layers (paragraph [0047]) wherein  $n = 0, 1, 2, 3 \dots$  said transparent dielectric layers having a high refractive index of  $n > 1.7$  or a low refractive index of  $n \leq 1.7$  said transparent dielectric layers having a high refractive index  $n$  being arranged in alternating manner with said transparent dielectric layers having a low refractive index  $n$ , said stack of  $2n + 1$  transparent dielectric layers being arranged adjacent to one of

Art Unit: 2809

the electrodes and a dielectric transparent layer having a high refractive index  $n$  adjoining said electrode (Paragraph [0016]):

**Regarding claim 2**, Yanagawa discloses an electroluminescent display as claimed in claim 1, where transparent dielectric layers having a refractive index  $n > 1.7$  is selected from the group consisting of  $\text{TiO}_2$ ,  $\text{ZnS}$  and  $\text{SnO}_2$  (Paragraphs [0016], [0045], [0047]).

**Regarding claim 3**, Yanagawa discloses an electroluminescent display as claimed in claim 1, where the transparent dielectric layers having a refractive index  $n > 1.7$  is selected from the group consisting of  $\text{SiO}_2$ ,  $\text{MgF}_2$  and aluminum silicates (Paragraphs [0016], [0045], and [0047]).

**Regarding claim 5**, Yanagawa discloses an electroluminescent display as claimed in claim 1, where the electroluminescent device is an active matrix device having a pixilated first electrode (paragraph [0028]).

**Regarding claim 6**, Yanagawa discloses an electroluminescent display as claimed in claim 1, where a capping layer (transparent substrate 11 figure 1) is placed adjacent to the second electrode and where the color converter material is embedded in or placed on top of the capping layer (paragraph [0015]).

**Regarding claim 8**, Yanagawa further discloses An electroluminescent device comprising an electroluminescent layer which is sandwiched between a first and a second electrode (figure 1, electrode 3 (anode), electrode 5 (cathode) and OLED 4) a color converting material which is capable of changing light emitted by the electroluminescent layer into light having a longer wavelength (paragraph [0015]) and a

Art Unit: 2809

stack of  $2n + 1$  transparent dielectric layers (paragraph [0016] and [0019]) wherein  $n=0, 1, 2, 3$ , said transparent dielectric layers having a high refractive index of  $n > 1.7$  or a low refractive index of  $n < 1.7$ , said transparent dielectric layers having a high refractive index  $n$  being arranged in alternating manner with said transparent dielectric layers having a low refractive index  $n$ , said stack of  $2n + 1$  transparent dielectric layers being arranged adjacent to one of the electrodes and a dielectric transparent layer having a high refractive index  $n$  adjoining said electrode (paragraphs [0016] and [0061]).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagawa (PCT/JP03/07654).

**Regarding claim 4,** Although Yanagawa does not expressly disclose that the dielectric layers having a high refractive index  $n$ , which is ZnS and a low refractive index  $n$ , which is MgF<sub>2</sub> as per claim 4, in paragraph [0019], Yanagawa discloses a sealant layer (dielectric layer) with a refractive index in the range of 1.3 to 2.5, which ZnS and MgF<sub>2</sub> are in between that range. Therefore, it would have been obvious to one of ordinary skills in the art at the time the invention was made to consider both ZnS and MgF<sub>2</sub> as high and low refractive index as claim by the applicant.

***Allowable Subject Matter***

**Claim 7** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior art of the record does not disclose or teach applicant's claimed electroluminescent color converting material, as specifically recited in claim 7.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elmito Breval whose telephone number is 571- 270-3099. The examiner can normally be reached on Mon-Fri 8:30 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrell Mckinnon can be reached on 571-272-4797. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/530,149

Page 6

Art Unit: 2809

July 12, 2007



Elmito Breval



LISA CAPUTO  
PRIMARY PATENT EXAMINER